

CLAIMS

We claim:

- 1 1. A method for monitoring a computer application,
2 comprising:
3
4 adjustably tuning performance evaluation bias between
5 processor and memory consumption; and

6 responsive to said bias, monitoring performance of said
7 computer application with respect to transaction time
8 parameters.
- 1 2. The method of claim 1, further comprising:

2 receiving from a user a first tuning parameter for
3 allocating memory for said monitoring performance.
- 1 3. The method of claim 1, further comprising:

2 receiving from a user a first tuning parameter for
3 allocating memory for said monitoring performance and a

4 second tuning parameter for specifying time out for in-
5 flight units of work.

1 4. The method of claim 2, further comprising:

2 initializing said memory with an in-flight transactions
3 vector table for anchoring synonym chains of in-flight
4 transaction cells;

5 accumulating time statistics for in-flight transactions
6 in said in-flight transaction cells;

7 initializing said memory with a completed transactions
8 table for storing time statistics for completed
9 transactions;

10 receiving from said computer application a transaction
11 log record for a unit of work;

12 hashing said first transaction log record to select
13 from said vector table an anchor to an in-flight
14 transaction cells chain corresponding to said unit of
15 work;

16 searching said in-flight transaction cells chain for
17 said unit of work;

18 responsive to finding said unit of work in said in-
19 flight transaction cells chain, capturing to said in-
20 flight transaction cell timing statistics from said
21 transaction log record;

22 responsive to not finding said unit of work in said in-
23 flight transaction cells chain, chaining a new in-
24 flight transaction cell to said chain and capturing to
25 said new in-flight transaction cell timing statistics
26 from said transaction log record; and

27 determining if said transaction log record completes a
28 transaction and, if so, updating said completed
29 transactions table with timing statistics for said
30 transaction and removing said in-flight transaction
31 cell from said in-flight transaction cells chain.

1 5. The method of claim 3, further comprising

2 initializing said memory with an in-flight transactions
3 vector table for anchoring synonym chains of in-flight

4 transaction cells;

5 accumulating time statistics for in-flight transactions
6 in said in-flight transaction cells;

7 initializing said memory with a completed transactions
8 table for storing time statistics for completed
9 transactions;

10 receiving from said computer application a transaction
11 log record for a unit of work;

12 hashing said first transaction log record to select
13 from said vector table an anchor to an in-flight
14 transaction cells chain corresponding to said unit of
15 work;

16 searching said in-flight transaction cells chain for
17 said unit of work;

18 responsive to finding said unit of work in said in-
19 flight transaction cells chain, capturing to said in-
20 flight transaction cell timing statistics from said
21 transaction log record;

22 responsive to not finding said unit of work in said in-
23 flight transaction cells chain, chaining a new in-
24 flight transaction cell to said chain and capturing to
25 said new in-flight transaction cell timing statistics
26 from said transaction log record;

27 determining if said transaction log record completes a
28 transaction and, if so, updating said completed
29 transactions table with timing statistics for said
30 transaction and removing said in-flight transaction
31 cell from said in-flight transaction cells chain; and

32 determining responsive to said second tuning parameter
33 if a selected unit of work being accumulated in a
34 selected in-flight transaction cell has timed out, and
35 if so removing from said selected in-flight transaction
36 cell from said in-flight transaction cell chain and
37 selectively updating said completed transactions table
38 with timing statistics for said selected unit of work.

1 6. A system for monitoring a computer application,
2 comprising:

3 a first user actuated tuning knob for allocating space

4 in memory for performance monitoring;

5 a second user actuated tuning knob for a specifying

6 time out value for in-flight units of work; and

7 a transaction monitor responsive to said first and

8 second user actuated tuning knobs for accumulating in

9 synonym chain cells in said space timing statistics for

10 a plurality of said in-flight units of work.

1 7. The system of claim 6, further comprising:

2 said memory including an in-flight transactions vector

3 table for anchoring synonym chains of in-flight

4 transaction cells;

5 said in-flight transaction cells for accumulating time

6 statistics for in-flight transactions;

7 said memory including a completed transactions table

8 for storing time statistics for completed transactions;

9 a monitor for receiving from said computer application

10 a transaction log record for a unit of work;

11 said monitor hashing said first transaction log record
12 to select from said vector table an anchor to an in-
13 flight transaction cells chain corresponding to said
14 unit of work;

15 said monitor for searching said in-flight transaction
16 cells chain for said unit of work;

17 said monitor further responsive to finding said unit of
18 work in said in-flight transaction cells chain for
19 capturing to said in-flight transaction cell timing
20 statistics from said transaction log record;

21 said monitor further responsive to not finding said
22 unit of work in said in-flight transaction cells chain
23 for chaining a new in-flight transaction cell to said
24 chain and capturing to said new in-flight transaction
25 cell timing statistics from said transaction log
26 record;

27 said monitor further for determining if said
28 transaction log record completes a transaction and, if
29 so, updating said completed transactions table with
30 timing statistics for said transaction and removing

31 said in-flight transaction cell from said in-flight
32 transaction cells chain; and

33 said monitor further for determining responsive to said
34 second tuning knob if a selected unit of work being
35 accumulated in a selected in-flight transaction cell
36 has timed out, and if so removing from said selected
37 in-flight transaction cell from said in-flight
38 transaction cell chain and selectively updating said
39 completed transactions table with timing statistics for
40 said selected unit of work.

1 8. A program storage device readable by a machine,
2 tangibly embodying a program of instructions executable by a
3 machine to perform method steps for monitoring a computer
4 application, said method comprising:

5 adjustably tuning performance evaluation bias between
6 processor and memory consumption; and

7 responsive to said bias, monitoring performance of said
8 computer application with respect to transaction time
9 parameters.

1 9. The program storage device of claim 8, said method
2 further comprising:

3 receiving from a user a first tuning parameter for
4 allocating memory for said monitoring performance.

1 10. The program storage device of claim 8, said method
2 further comprising:

3 receiving from a user a first tuning parameter for
4 allocating memory for said monitoring performance and a
5 second tuning parameter for specifying time out for in-
6 flight units of work.

1 11. The program storage device of claim 9, said method
2 further comprising:

3 initializing said memory with an in-flight transactions
4 vector table for anchoring synonym chains of in-flight
5 transaction cells;

6 accumulating time statistics for in-flight transactions
7 in said in-flight transaction cells;

8 initializing said memory with a completed transactions
9 table for storing time statistics for completed
10 transactions;

11 receiving from said computer application a transaction
12 log record for a unit of work;

13 hashing said first transaction log record to select
14 from said vector table an anchor to an in-flight
15 transaction cells chain corresponding to said unit of
16 work;

17 searching said in-flight transaction cells chain for
18 said unit of work;

19 responsive to finding said unit of work in said in-
20 flight transaction cells chain, capturing to said in-
21 flight transaction cell timing statistics from said
22 transaction log record;

23 responsive to not finding said unit of work in said in-
24 flight transaction cells chain, chaining a new in-
25 flight transaction cell to said chain and capturing to
26 said new in-flight transaction cell timing statistics

27 from said transaction log record; and

28 determining if said transaction log record completes a
29 transaction and, if so, updating said completed
30 transactions table with timing statistics for said
31 transaction and removing said in-flight transaction
32 cell from said in-flight transaction cells chain.

1 12. The program storage device of claim 10, said method
2 further comprising

3 initializing said memory with an in-flight transactions
4 vector table for anchoring synonym chains of in-flight
5 transaction cells;

6 accumulating time statistics for in-flight transactions
7 in said in-flight transaction cells;

8 initializing said memory with a completed transactions
9 table for storing time statistics for completed
10 transactions;

11 receiving from said computer application a transaction
12 log record for a unit of work;

13 hashing said first transaction log record to select
14 from said vector table an anchor to an in-flight
15 transaction cells chain corresponding to said unit of
16 work;

17 searching said in-flight transaction cells chain for
18 said unit of work;

19 responsive to finding said unit of work in said in-
20 flight transaction cells chain, capturing to said in-
21 flight transaction cell timing statistics from said
22 transaction log record;

23 responsive to not finding said unit of work in said in-
24 flight transaction cells chain, chaining a new in-
25 flight transaction cell to said chain and capturing to
26 said new in-flight transaction cell timing statistics
27 from said transaction log record;

28 determining if said transaction log record completes a
29 transaction and, if so, updating said completed
30 transactions table with timing statistics for said
31 transaction and removing said in-flight transaction
32 cell from said in-flight transaction cells chain; and

33 determining responsive to said second tuning parameter
34 if a selected unit of work being accumulated in a
35 selected in-flight transaction cell has timed out, and
36 if so removing from said selected in-flight transaction
37 cell from said in-flight transaction cell chain and
38 selectively updating said completed transactions table
39 with timing statistics for said selected unit of work.

1 13. A computer program product for monitoring a computer
2 application according to the method comprising:

3 adjustably tuning performance evaluation bias between
4 processor and memory consumption; and

5 responsive to said bias, monitoring performance of said
6 computer application with respect to transaction time
7 parameters.